EBIO 330: Insect Biology Lab
Thursdays from 1PM to 4:50PM
Anderson Biological Laboratories 124

Course Overview

This one-credit laboratory course focuses on understanding the biology of the world's most diverse animal group—the insects—through collection, curation, and identification of specimens in natural and urban environments. The class will also provide the students with an overview of insect Biology (EBIO 326).

Instructor Contact Information

Instructor: Dr. Bene Bachelot
Office: 211D Anderson Biological Laboratories
Email: bb32@Rice.edu
Office Hours: You are always welcome to come by my office, but I can't guarantee I'll be available if you drop by unannounced. Please e-mail me to set-up a time to meet.

Course Objectives and Learning Outcomes

By the end of the course, students are expected to know:

- The fundamentals of insect biology;
- the distinguishing characteristics of major insect groups;
- how entomological collections contribute to agricultural, ecological, and medical research;
- why insects are important including their ecological, economic, and cultural value;
- how insect diversity is distributed both globally and locally.

By the end of the course, students are expected to be able to:

- use appropriate field techniques for collecting and preserving insects;
- prepare insect specimens for identification using techniques appropriate for each group;
- use a dichotomous key to identify insects to order and in some cases to family, subfamily, genus, and species;
- use targeted insect collections to assess the species diversity of insects in natural and urban environments; and
- create a scientific report that is consistent with published peer-reviewed journal articles in terms of their format, terminology, grammar, tables, figures, and citations.

Required Texts and Materials

Triplehorn, C. A., & Johnson, N. F. (2005). Borror and DeLong's Introduction to the Study of Insects Belmont, CA: Thomson Brooks/Cole.

Absence Policies

You must participate in every scheduled course meeting, unless there are extenuating circumstances and I approve your absence in advance. If you miss a scheduled course meeting then we will work together to figure out a way for you to make up the work you missed.

Assignments

More detailed instructions for the assignments described below may be found on our Owl-space website.

- **Insect collection** - Students work in teams to assemble a collection of insects that they personally collect (i.e. not obtained from another person) and identify to Family (or below). Guidance is provided but it is expected that much of the work for the collection is done independently. It is further expected that all members of a team contribute equally to the collection; failure to contribute one's fair share influences one's participation grade. All members of a team receive the same grade for their collection. Students will have access to ABL 125 and the insect collection materials therein. Collection materials that leave the lab must be signed out and signed back in.

- **Written report** – Students work in groups to survey the species diversity of targeted groups of insects at particular sites that we visit as a class. A report written in the format summarizes the species that were collected and the distribution of native and non-native species and is shared with each site's managers to help to inform land use and conservation practices.

- **Lab practical exam** – The lab practical exam involves the identification of insect specimens based on students' knowledge of basic insect taxonomy and their ability to use a dichotomous key.

- **Lab content exam** – The lab content exam will involve a brief multi-choice questions based on the students' knowledge of basic insect biology acquired during the lecture part of the lab.

Grading Late assignments will be penalized by 10% of the original point value per 24 hours late.

Assignment	Points	% of final grade
Insect Collection	100	40%
Written report	100	20%
Lab practical exam	100	20%
Lab content exam	100	10%
Participation	100	10%
Total	**500**	**100%**

Rice Honor Code

In this course, all students will be held to the standards of the Rice Honor Code, a code that you pledged to honor when you matriculated at this institution. If you are unfamiliar with the details of this code and how it is administered, you should consult the Honor System Handbook at http://honor.rice.edu/honor-system-handbook/. This handbook outlines the University's expectations for the integrity of your academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process.

Disability Support Services

If you have a documented disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with Disability Support Services (Allen Center,

Room 111 / adarice@rice.edu / x5841) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.

Syllabus Change Policy

This syllabus is only a guide for the course and is subject to change with advanced notice.

Course Schedule

Date	In class topic or lab	Assignments due	Readings
8/24	Course introduction – L1: Why do we study insects?		pp. 1-4
08/31	Campus collection - L2: Overview of insect orders		pp. 52-61; 99-167
09/7	Identification workshop 1 – L3: External structures		pp. 5-22
09/14	Memorial Park Collection 1 – Field trip		
09/21	Memorial Park Collection 2 - L4: Physiology, development, and reproduction		pp. 23-50
09/28	Curation workshop – L5: Food webs and feeding strategies		pp. 92-97
10/5	Cook Branch Collection – Field trip		
10/12	Identification workshop 2		
10/19	Work on collection		
10/26	Lab practical exam		
11/2	Work on collection		
11/9	Work on collection		
11/16	Lab content exam		
11/23	Thanksgiving Break – No class	Reports due	
11/30	Course wrap-up	Collections due	